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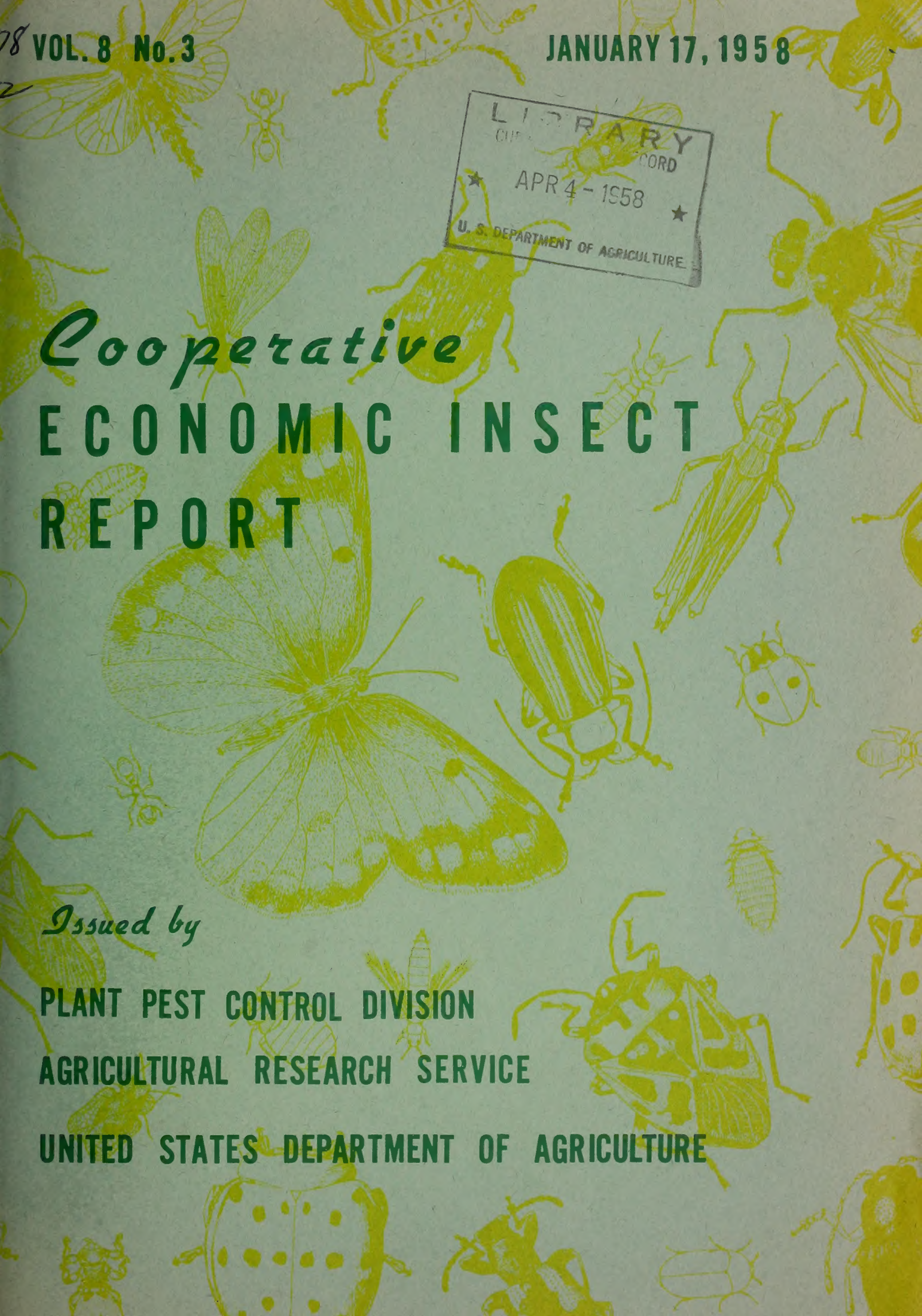

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PEST CONTROL DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

PLANT PEST SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Survey Section
Plant Pest Control Division
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 8 January 17, 1958 Number 3

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

BOLL WEEVIL hibernation counts higher in Madison County, Louisiana, than any time on record except those of 1955. More weevils found in trash in McNairy County, Tennessee, than any time since 1952. (p. 29).

Status of the EUROPEAN CORN BORER in 1957. (p. 33).

SUMMARY OF INSECT CONDITIONS - 1957 - Louisiana. (p. 43).

INSECTS not known to occur in the United States. (p. 47).

Reports in this issue are for the week ending January 10 unless otherwise designated.

WEATHER OF THE WEEK ENDING JANUARY 13, 1958

More cold weather in Florida, unseasonably high temperatures in the northern Great Plains, and a severe storm along the North Atlantic Coast were the week's main weather highlights, as continued mild, dry weather in the Western Great Plains further depleted topsoil moisture and cold, wet weather in the Southeast continued the unfavorable development of fall-planted crops.

The latest of a series of cold snaps in Florida this winter resulted in average temperatures for the week of 10° to 13° below normal. Snowfall was observed at numerous Northern and central locations on the 8th, and although most of it was limited to a few flakes which melted as they fell, several points in Hillsborough and Polk Counties reported accumulations sufficient for snowballs. Citrus further suffered as minima on the 9th ranged mostly in the low 20's in north, the middle 20's in central portions, and the low 30's in the south, and frost occurred in inland areas along the lower east coast. Minima were not quite as low on the 10th, but frost was reported in nearly all districts. Daytime temperatures on the 8th remained near or below 40° in north and central portions. It is interesting to note that in contrast, maximum temperatures in North Dakota on the 8th were in the middle 40's and low 50's.

The week was more than 20° warmer than normal at many points in the Northern Great Plains. A high of 70° was recorded at Wood, South Dakota on the 8th, and on the same date Lead, South Dakota, had 62°, a new high for January. A storm in the northern Gulf of Mexico produced moderate to heavy rains in all Gulf coastal areas on the 6th, and along the Atlantic Coast on the 7th as it moved northward about 150 miles offshore after crossing the Florida Peninsula. Centered near Cape Cod, Mass., at 1 a.m., on the 8th, winds over a small area reached hurricane force, and a low barometer reading of 28.35 inches set a new January record at Nantucket, Mass. Several hundred dwellings were damaged in Cape Cod and south shore areas of Massachusetts, and trees and wires were downed. Damage of $200 thousand was preliminarily estimated for these areas, and an equal amount for the remainder of New England. Precipitation was mostly in the form of snow from Virginia northward. During the storm over 12 inches of snow fell on the lower Delmar Peninsula of Maryland, 8 to 15 inches along the New Jersey Coast and 2 to 4 inches in the west and central portions of the State. Falls ranged from 4 to 12 inches over most of New England, but much heavier falls of up to 20 inches were reported in central and eastern Connecticut and northwestern Rhode Island.

Temperatures for the week averaged below normal east and south of lines joining Dallas, Texas, with Sault Ste. Marie, Mich., and El Paso, Texas, respectively, except in Maine where they were slightly above. Elsewhere weekly averages were above normal except normal or slightly below in the Central Valley of California. Greatest average departures for the week ranged from 14° below normal at Charleston, S. C., to 22° above at Devils Lake, North Dakota. Precipitation exceeding an inch generally was limited to the Atlantic, Gulf, and central and northern Pacific coastal areas and a few locations in the southeastern Great Plains. Elsewhere falls were very light with most of the Great Plains recording none. Much of the heavy snow in the Northeast had melted by the end of the week, with a 1-inch cover extending only as far south as northern New Jersey. The ground was bare in the Ohio and middle Mississippi Valleys and throughout the Great Plains. In the Far West, accumulations in the Cascades continued to increase and depths were above average for this time of the year. (Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - OKLAHOMA - Occasional specimen on barley in Major County (Coppock); averaging less than one per linear foot of wheat in Logan County (Henderson, Wood) and approximately 10 per linear foot in volunteer oats in Kingfisher County (Owens).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Counts averaged 10 per 10 sweeps in 2 fields in Washita County (Hudson), and 10 per 10 sweeps from one field in Garfield County (Owens).

ALFALFA WEEVIL (Hypera postica) - CONNECTICUT - Found in all counties of State surveyed summer of 1957. The only county not surveyed was Middlesex, and this county was assumed infested. The additional records should be added to map on page 18, CEIR 8(2), January 10. (Turner).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Average number in hibernation per square foot of bunch grass was 1,450 in Garfield County, 188 in Grant County, 4.3 in Alfalfa County, 23 in Major County and 29 in Woods County. Highest counts were 6,941 per square foot of grass in Garfield County. (Coppock, Fed.-State Chinch Bug Survey).

GRAIN APHIDS - OKLAHOMA - Light scattered numbers of Macrosiphum granarium and Rhopalosiphum fitchii occur on small grains in most northwestern counties. Light populations of R. maidis (0-20 per linear foot) found in barley in same area. (Coppock).

A PYEMOTID MITE (Siteroptes graminum) - OREGON - Recovered in small numbers in Springwater, from Chewings fescue, January 2. This species has been tentatively implicated in the transmission of silvertop disease of grasses. (Krantz, Jan. 6).

FRUIT INSECTS

AN ERIOPHYID MITE (Vasates fockeui) - CALIFORNIA - Heavy infestation on cherry 3 miles east of Linden, San Joaquin County. This is first infestation of cherry in central California. This species has not been a pest of much importance to date, although the mite was found in damaging numbers about ten years ago near Elk Grove involving prunes. (Kiefer, Dec. Taxonomy Report).

YELLOW SCALE (Aonidiella citrina) - CALIFORNIA - Light locally on olive in Sacramento County. (Cal. Coop. Rept.).

CITRUS WHITEFLY (Dialeurodes citri) - CALIFORNIA - Light infestations within 10 city blocks of Sacramento. Survey continuing. (Cal. Coop. Rept.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - OREGON - Root-inhabiting forms caused considerable damage to young apple stock in a Salem nursery. (Capizzi).

TRUCK CROP INSECTS

MELONWORM (Diaphania hyalinata) - FLORIDA - Adult collected at window at Mandarin, Duval County, December 12, 1957. (Dempsey).

CELERY LEAF TIER (Udea rubigalis) - CALIFORNIA - Light locally on artichokes in Watsonville area, Santa Cruz County. (Cal. Coop. Rept.).

COTTON INSECTS

Boll Weevil Hibernation Survey in Fall - 1957. LOUISIANA - Collections of surface woods trash samples were made from November 4 through December 10 in northeastern Louisiana area comprised of East Carroll, Madison and Tensas Parishes. The number of weevils per acre found was 10,330 in East Carroll Parish; 6,940 in Tensas Parish; and 6,860 in Madison Parish. The average for the area was 8,043. Similar records have been made in Madison Parish for 22 years, beginning in the fall of 1936. In only one year, 1955, has a larger number of weevils been found in the fall surface woods trash survey, than the 6,860 per acre found in the fall of 1957. Following continuous rains in September there was an abundant supply of squares, blooms and young bolls in all cotton fields which afforded food and breeding material for boll weevil. Even though defoliation was very general before the hard freeze on October 28 occurred, it is apparent that there was a heavy population present. (Smith, Cleveland, Read, Williams). TENNESSEE - The results of the survey in McNairy County an show an average of 2,365 live weevils per acre. More weevils were found in hibernation in the fall of 1957 than any time since the fall of 1952, when the average was 2,259 per acre. The counts in McNairy County represent the heaviest weevil-infested area in the State, however the remainder of the southern counties should run only slightly lower in their averages. (Locke).

PINK BOLLWORM (Pectinophora gossypiella) - OKLAHOMA - Twenty-one lint cleaner and 18 gin stands were inspected in 12 counties; total of 54 larvae were found. Six counties were negative. (Fed.-State PBW Com., Dec. 30). MISSOURI - A survey was conducted in 5 southeastern counties by personnel of the Missouri State Department of Agriculture, University of Missouri, Southeastern Experiment Station and Plant Pest Control Division of ARS. Of 204.5 bushels of trash inspected, no pink bollworm was found. (Hare).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

A SAND LILY APHID (Myzus leucocrini) - FLORIDA - Heavy infestations on daylily at Gainesville (Hetrick), December 22, 1957. Det. A. N. Tissot. Also reported heavy on daylily at Jacksonville, December 30, 1957. (King). First record for the State. (H. Denmark).

AN ASIATIC RED SCALE (Aonidiella taxus) - FLORIDA - Found on podocarpus at Groveland, Lake County. It is believed that movement of nursery stock is disseminating pest. Infested nurseries are quarantined and an attempt to control the scale is being made. (H. Denmark).

LOCUST TWIG BORER (Ecdytolopha insiticiana) - PENNSYLVANIA - Moderate on black locust in Susquehanna County. (Gesell).

AN APHID (Schizolachnus pini-radiatae) - PENNSYLVANIA - Heavy infestation on Scotch and red pine in Monroe County during October, 1957. Det. L. M. Russell. (Drooz).

Uncommon Aphid Records for Utah. Aphis nerii infesting oleander at St. George in September; Chaitophorus utahensis on willows at Salt Lake and Oasis during June; Cinara tanneri abundant on pinion pine twigs near Duchesne in late May; Drepanosiphum platanoides on maple in Logan Canyon; Lipaphis erysimi (=Rhopalosiphum pseudobrassicae) on mustards at Santa Clara in April; Macrosiphum rudbeckiarum on Rudbeckia in Logan Canyon; Myzocallis maureri on oak at Camp Williams; Pemphigus junctisensoriata on Populus angustifolia at Heber in July; Pentatrichopus thomasi in rose sweeps at Garden City in June; Phyllaphis fagi infesting beech at Logan during June; Pterocomma beulahensis on poplar in Allen Canyon in July; Thelaxes californicus on oak at Farmington in spring; Thripsaphis utahensis in meadows at Provo, July 7; Tlja scariolae (=Macrosiphum barri) at Hurricane in fall. Det. Hille Ris Lambers. (Knowlton).

CHAFF SCALE (*Parlatoria pergandii*) - SOUTH CAROLINA - Infesting palmetto palm in Richland County. Det. by J. A. Berly. (Nettles)

EUONYMUS SCALE (*Unaspis euonymi*) - OKLAHOMA - Severe infestation on euonymus hedge in Tulsa. (Stiles). NORTH CAROLINA - On camellias and other shrubs in Orange County. (Harris, Farrier).

PINE NEEDLE SCALE (*Phenacaspis pinifoliae*) - CALIFORNIA - Medium on Coulter pine in Capitol Park, Sacramento. (Cal. Coop. Rept.).

A TREEHOPPER (*Platycotis vittata*) - SOUTH CAROLINA - Caused considerable damage to leaves and twigs of oak in Pickens, October 22. Det. by L. M. Russell. (Nettles, Wood).

INSECTS AFFECTING MAN AND ANIMALS

SHAFT LOUSE (*Menopon gallinae*) - FLORIDA - Adult collected on chicken at Dade City, Pasco County, December 12, 1957. Det K. C. Emerson. (Jaquette).

BED BUG (*Cimex lectularius*) - MARYLAND - Troublesome in homes at Hyattsville and Rockville. (U. Md., Ent. Dept.).

CATTLE GRUBS (*Hypoderma* spp.)-NORTH CAROLINA - None found in 73 cattle examined in Wake County, 9 head in Alamance County and 105 head in Davidson County. (Jones, Farrier, Gantt). Only one grub found in over 20 head in Orange County. (Greene). Average of 0.92 larvae per head in 24 dairy cows in Alamance County. None found on 35 treated animals in North Carolina State College herd in Wake County. (Jones, Farrier).

CHICKEN HEAD LOUSE (*Cuclotogaster heterographus*) - NORTH CAROLINA - Found on chickens in Iredell County, October 29, 1957. (Scott, Johnson).

STORED-PRODUCT INSECTS

BULB MITE (*Rhyzoglyphus echinopus*) - PENNSYLVANIA - Hyacinth bulbs very heavily infested in Lancaster County, December 30, 1957. (Pepper).

A DERMESTID (*Perimegatoma vespulae*) - CALIFORNIA - Light in sacks in Kern County and heavy in barrel of mixed corn and beans in Riverside County. These finds constitute the fourth and fifth records in State as far as known. (Cal. Coop. Rept.).

MISCELLANEOUS INSECTS

IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) - FLORIDA - Found in two new townships in Gadsden County. (H. Denmark).

AN EARWIG (*Doru aculeatum aculeatum*) - NORTH CAROLINA - Found in garden, flower plants in basement and in home in Caldwell County, November 6, 1957. (Cartner, Gurney).

COLLEMBOLA - NORTH CAROLINA - Adults of *Achorutes armatus* abundant in yard in Onslow County, November 18, 1957. Few adults of *Sminthurinus elegans* and *Isotoma cinerea* also found. (Scott, Wray).

AMERICAN COCKROACH (*Periplaneta americana*) - VIRGINIA - Heavy in a home in Vienna. (Rowell).

BLACK WIDOW SPIDER (*Latrodectus mactans*) - VIRGINIA - Found in basement of home in Radford. (Morris).

CLOVER MITE (Bryobia praetiosa) - VIRGINIA - Very heavy around windows of home in Bedford County. (Boone, Morris).

AN EARTHWORM MITE (Fuscuropoda agitans) - NORTH CAROLINA - An earthworm bed heavily infested in Wake County, December 31, 1957. (Wray, Farrier).

OLD HOUSE BORER (Hylotrupes bajulus) - NORTH CAROLINA - Large numbers emerging through pine paneling and pine subflooring into a home in Wake County. (Flake, Wright).

STATUS OF THE EUROPEAN CORN BORER IN 1957

Survey Data Provided by State Agricultural Agencies
Compiled and Summarized by
Leo G. K. Iverson
Plant Pest Control Division, United
States Department of Agriculture

Agricultural agencies in 24 States reported on surveys conducted in their States to determine the abundance and distribution of the European corn borer (Pyrausta nubilalis) in 1957. All survey data, summaries or records of field observations were submitted to Central Plant Pest Control Regional office for processing. This report is a compilation of all information submitted by the State agencies.

Distribution

The spread of the European corn borer continued to be to the south in 1957, particularly in Miss.,Arkansas, Alabama and Louisiana. The most notable spread involved seven northeast parishes of Louisiana. Although the pest was reported from this State in 1948, surveys failed to disclose additional specimens until 1957.

Counties reported as infested for the first time in 1956 are as follows:

Alabama

Fayette
Lamar
Marion
Tuscaloosa
Walker

Arkansas

Baxter
Clark
Cleburne
Fulton
Izard
Madison
Marion
Newton
Searcy
Van Buren

Louisiana

Morehouse
Concordia
Tensas
Madison
East Carroll
West Carroll
Richland

Mississippi

Holmes
Webster
Humphreys
Yazoo
Issaquena
Warren

South Carolina

Oconee

Abundance

The 1957 corn borer abundance survey began in late August and continued through November. The survey is designed to measure the fall population of corn borer larvae. The participating States were encouraged to time the surveys to include a high percentage of mature larvae whenever possible. In all cases except of minor differences in compiling data, the accepted survey methods were used.

The survey was continued on a district basis this year. A district is usually a group of counties within a State; however, some of the smaller states have been considered as a single district. A comparison of population levels for 1956 and 1957 is shown in Table 1.

Population levels of the European corn borer dropped quite drastically in the Eastern United States except for several counties in Rhode Island and Suffolk County, New York, where economic populations are still present. The average for this group of states fell from 186 borers per hundred stalks in 1956 to 104 in 1957.

The general decline in population trends shown in the Eastern States was also shown in several of the North Central States group. Illinois, Indiana, Michigan and Ohio recorded lower population levels in 1957 than in 1956. The most outstanding feature shown by the 1957 survey was the ability of this pest to rebound from comparatively low population levels to relatively high levels in one season. Notable examples occurred in Iowa, Missouri, South Dakota, Nebraska and northeastern Kansas. The overall average for this group of States rose from 102 borers per 100 stalks in 1956 to 178 in 1957.

Populations of the European corn borer reached the level where organized surveys became practical in Arkansas and Alabama. Thirty counties surveyed in Arkansas having an average of 28 borers per 100 stalks. In Alabama, 4 counties were surveyed showing 141 borers per 100 stalks.

For the entire United States, based on comparable districts surveyed, the average number of borers per 100 plants rose from 112 in 1956 to 170 in 1957.

A summary of the 1956 and 1957 surveys is shown in Table 1 by States and Districts. State summaries are shown in Table 2. Accompanying maps show districts surveyed, approximate population levels, and counties infested for the first time in 1957.

Table 1. Summary by States of Eurpean corn borer abundance in corn, fall of 1957, compared with data for 1956.

State	1956			1957			Comparable Districts or Counties Surveyed Both Years		
	Number of Districts Surveyed	Average Number of Borers per 100 Plants	Counties Surveyed	Number of Districts Surveyed	Average Number of Borers per 100 Plants	Counties Surveyed	Districts	Number of Borers per 100 Plants 1956	Number of Borers per 100 Plants 1957
Eastern United States									
Delaware	1	243	3	1	90	3	1	243	90
Maryland	1	80	23	1	60	23	1	80	60
New Hampshire	1	22	9	1	8	9	1	22	8
New Jersey	1	365	12	1	89	12	1	365	89
New York	2	201	6	1	92	7	1	286	147
Pennsylvania	9	106	42	9	40	34	-	-	-
Rhode Island	1	335	5	1	312	5	1	335	312
Vermont	1	5	14	1	2	14	1	5	2
Virginia	2	171	32	2	116	32	2	171	116
West Virginia	4	38	12	1	40	15	-	-	-
Total	23		164	19		154	9		
Average 1/								186	104
North Central States									
Illinois	9	127	80	9	62	62	7	162	76
Indiana	11	97	92	12	32	92	11	97	35
Iowa	12	220	99	12	419	99	12	220	419
Kansas	3	31	27	4	119	29	3	31	153
Michigan	3	34	28	3	9	28	3	34	9
Minnesota	6	59	64	6	83	64	6	59	83
Missouri	4	90	49	7	346	41	4	90	410
Nebraska	5	147	64	7	230	64	4	136	272
North Dakota	4	44	14	3	93	6	3	50	93
Ohio	5	51	32	5	35	30	4	51	35
South Dakota	6	52	42	6	313	47	6	52	363
Wisconsin	8	23	61	7	36	55	7	25	36
Total	76		652	81		617	70		
Average 1/								102	178
United States									
Total	99		816	100		771	79		
Average 1/								112	170
States Surveyed but not Included in U.S. Average									
Alabama				1	141	4	1	-	141
Arkansas				1	28	30	1	-	28

1/ Weighted averages based on districts surveyed.

Table 2--European corn borer abundance in corn, fall of 1957 compared with data for 1956

State		Average number of borers per 100 plants	
		1956	1957
Arkansas (Ex. Sta., Ex. Ser.)			
(Survey represents 30 counties. Range of borers per 100 stalks 0-149. Average for 30 counties 28 borers per 100 stalks).			
Alabama (Ex. Ser.)			
Lauderdale		-	43
Colbert		-	122
Marshall		-	276
De Kalb			123
Average			141
Delaware (Agr. Exp. Sta.)			
Kent		187	39
New Castle		219	44
Sussex		323	186
State mean		243	90
Illinois (Natural History Survey, Ext. Ser.)			
Northwest		208	80
Northeast		141	70
West		184	143
Central		228	66
East		147	36
West Southwest		132	129
East Southeast		80	12
Southwest		26	22
Southeast		1	1
State mean		127	62
Indiana (Ex. Sta., Ex. Ser.)			
1956	1957		
Northwest	NNW	149	95
North Central	NNC	100	41
Northeast	NNE	71	41
Northwest Central	NW	130	8
Northeast Central	NC	178	10
Central	NE	114	18
Southwest Central	SW	72	10
-	SC		11
Southeast Central	SE	117	27
Southwest	SSW	24	3
South Central	SSC	41	65
Southeast	SSE	70	62
State mean		97	32
State mean comp. districts (11)		97	35
Iowa (State Dept. of Ag., Ex. Ser., Exp. Station, Ent. Research USDA)			
District I		296	904
District II		252	306
District III		68	118
District IV		236	944
District V		314	387
District VI		173	81
District VII		162	552
District VIII		248	430
District IX		332	195
District X		185	383
District XI		193	358
District XII		175	367
State mean		220	419
Kansas (Ins. Sur.)			
North Central		2	20
Northeast		69	267
East Central		22	172
Central		-	18
State mean		31	119
State mean comparable districts (3)		31	153
Maryland (Agr. Exp. Sta., Ins. Sur.)			
Allegany		13	31
Anne Arundel		24	32
Baltimore		71	39
Calvert		37	27
Caroline		151	49
Carroll		123	84

Table 2 -- (Cont'd)

	Average number of borers per 100 plants	
	1956	1957
Maryland (cont'd)		
Cecil	49	30
Charles	50	10
Dorchester	166	105
Frederick	43	77
Garrett	11	4
Harford	64	45
Howard	51	21
Kent	41	43
Montgomery	40	34
Price Georges	31	11
Queen Annes	72	20
St. Marys	95	94
Somerset	94	150
Talbot	59	95
Washington	106	43
Wicomico	155	90
Worcester	302	243
State mean	80	60
Michigan (Ex. Ser.)		
Southwest	51	8
Northeast	18	9
Southeast	32	9
State mean	34	9
Minnesota (State Dept. of Agr.)		
West Central	49	69
Central	33	48
East Central	30	19
Southwest	95	208
South Central	121	123
Southeast	26	40
State mean	59	83
Missouri * (Ext. Ser., Ins. Sur.)		
1956 1957		
NW Dist. 1	67	685
NE Dist. 2	46	580
WC Dist. 3	20	318
SE Dist. 4	226	372
Dist. 5		331
Dist. 6		40
Dist. 9		95
State mean	90	346

* Crop Reporting districts
1956 survey included Dist. 1,2,3,4,9

State	Average number of borers per 100 plants	
	1956	1957
Nebraska (Ag. Exp. Sta., Ex. Ser., Ins. Sur.)		
Northeast	255	475
East Central	158	319
Central	187	-
Southeast	50	135
South Central	83	159
Platte Valley	-	208
Loup Valley	-	277
Panhandle	-	37
State mean	147	230
Average comp. dist. (4)	136	272
New Hampshire (State Dept. of Agr.)		
Belknap	16	4
Carroll	59	8
Cheshire	6	7
Grafton	13	7
Hillsboro	7	9
Merrimack	39	6
Rockingham	15	16
Strafford	32	7
Sullivan	15	6
State mean	22	8
New Jersey (Dept. of Ag. & College of Ag.)		
Burlington	609	81
Camden	226	94
Cumberland	154	36
Gloucester	374	53
Hunterdon	204	10
Mercer	690	117
Middlesex	567	63
Monmouth	597	408
Salem	127	41
Somerset	695	151
Sussex	74	4
Warren	67	8
State mean	365	89
New York (Ex. Ser.)		
Dutchess	-	5
Erie	-	20
Monroe	12	33

Table 2 -- (Cont'd)

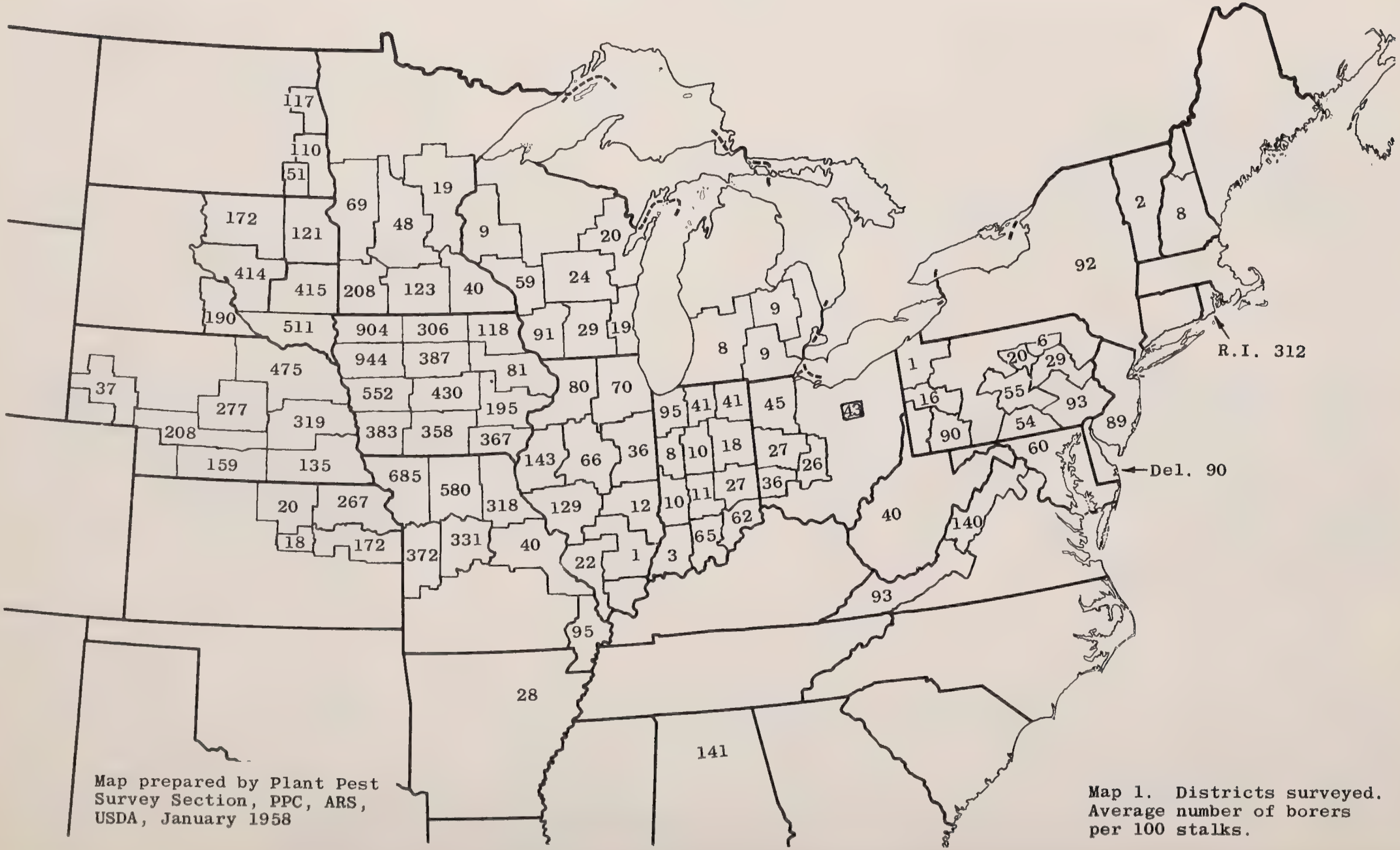
State	Average number of borers per 100 plants 1956	1957
New York (cont'd)		
Onondaga	34	3
Ontario	1	-
Orleans	11	2
Steuben	60	-
Suffolk	1,089	550
Ulster	-	30
State mean	201	92
State mean comparable counties (4)	286	147
North Dakota (State Dept. of Agr.)		
District I	38	117
District II	52	110
District III	60	51
District IV	-	-
District V	29	-
State mean	44	93
Comp. dist. (3)	50	93
Ohio (Ag. Ex. Sta., Ex. Ser.)		
Northwest	63	45
West Central	48	27
Central	50	26
Southwest	48	36
Northeast	44	43
State mean	51	35
Pennsylvania (Dept. of Ag.)		
Northwest	41	1
North	10	20
Northeast	2	6
West	31	16
Central	41	55
East	150	29
Southwest	41	90
South	245	54
Southeast	398	93
State mean	106	40
Rhode Island (Agr. Exp. Sta.)		
Bristol	267	
Kent	622	State-wide
Rhode Island (cont'd)		
Newport	335	
Providence	100	
Washington	355	
State mean	335	312
South Dakota (Ag. Ex. Sta., Ext. Ser.)		
North Central	48	172
Northeast	44	121
Central	12	414
East Central	88	415
South Central	36	190
Southeast	84	571
State mean	52	313
Vermont (State Dept. of Agr.)		
Addison	2	2
Bennington	34	5
Caledonia	4	1
Chittenden	1	2
Essex	3	0
Franklin	7	0
Grand Isle	2	4
Lamoille	6	0
Orange	3	2
Orleans	3	0
Rutland	1	4
Washington	3	1
Windham	4	0
Windsor	3	2
State mean	5	2
Virginia (Ins. Sur.)		
Northern Va.	197	140
Southwestern Va.	146	93
State mean	171	116
West Virginia (Ex. Sta.)		
Berkeley	District	15
Braxton	Survey	27
Brooke		70
Clay		8
Greenbrier		38
Hampshire		13

Table 2 -- (cont'd)

State	Average number of borers per 100 plants		State	Average number of borers per 100 plants	
	1956	1957		1956	1957
West Virginia (cont'd)			Wisconsin		
			(State Dept. of Agr.)		
Hancock	District	23			
Hardy		24	Northwest	12	9
Lewis	Survey	39	North Central	2	-
Monongalia		36	Northeast	15	20
Monroe		101	West Central	25	59
Ohio		23	Central	17	24
Pleasants		4	Southwest	56	91
Wirt		7	South Central	31	29
Wood		8	Southeast	20	19
State mean	38	40	State mean	23	36
			Comparable districts (7)	25	36

EUROPEAN CORN BORER ABUNDANCE

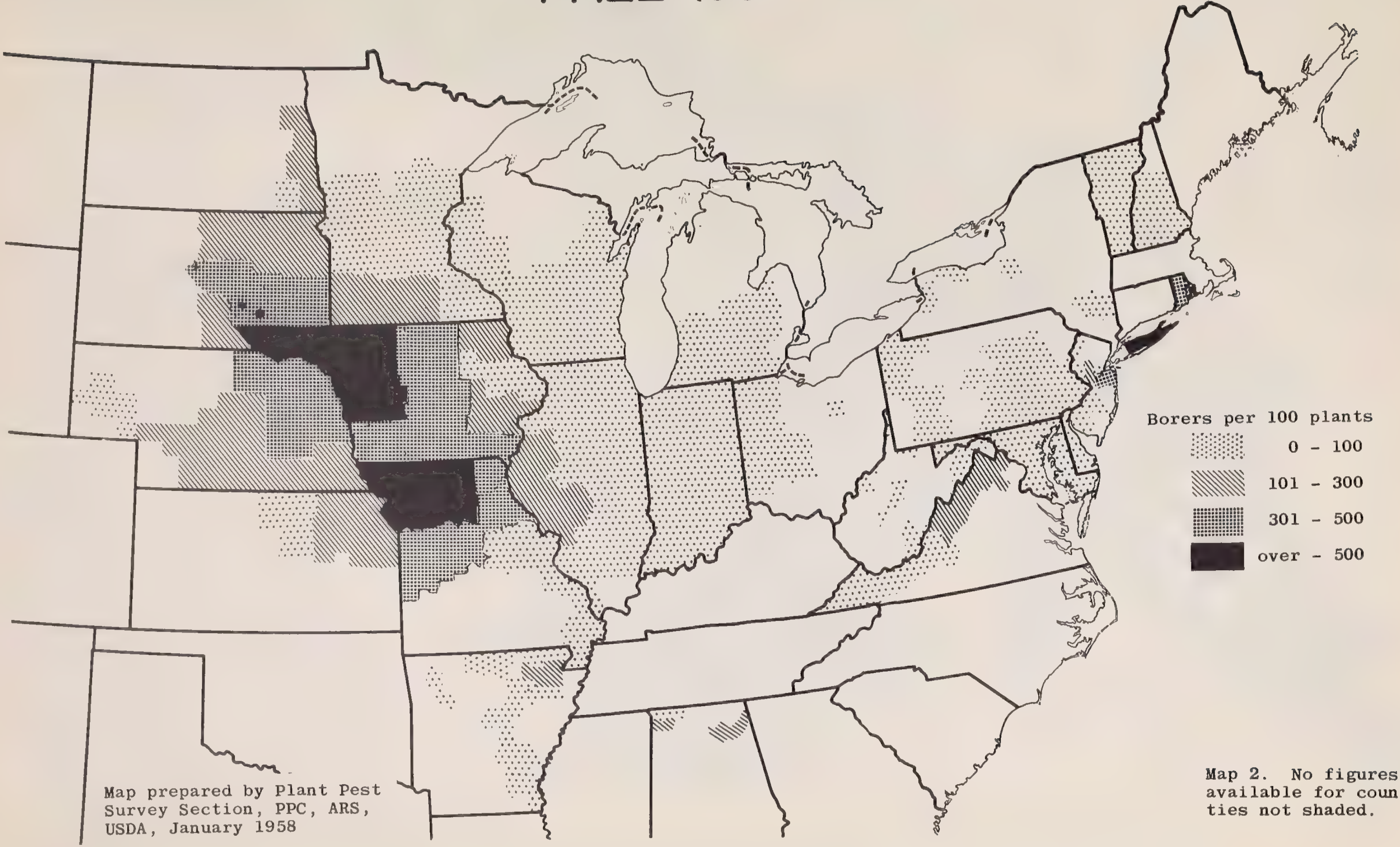
FALL 1957



Map prepared by Plant Pest
Survey Section, PPC, ARS,
USDA, January 1958

Map 1. Districts surveyed.
Average number of borers
per 100 stalks.

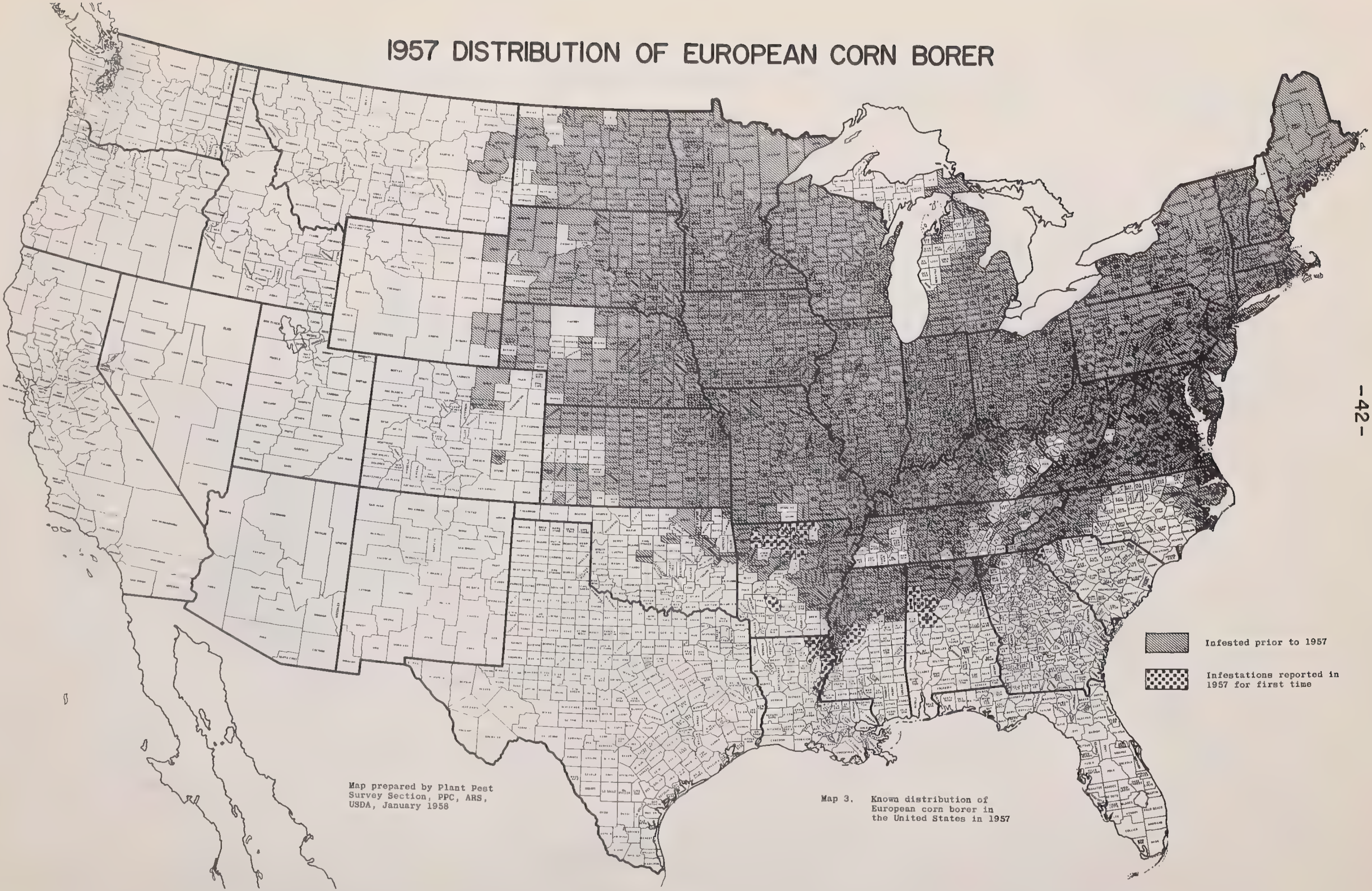
EUROPEAN CORN BORER ABUNDANCE
FALL 1957



Map prepared by Plant Pest Survey Section, PPC, ARS, USDA, January 1958

Map 2. No figures available for counties not shaded.

1957 DISTRIBUTION OF EUROPEAN CORN BORER



Map prepared by Plant Pest
Survey Section, PPC, ARS,
USDA, January 1958

Map 3. Known distribution of European corn borer in the United States in 1957

SUMMARY OF INSECT CONDITIONS - 1957

LOUISIANA

Reported by A. D. Oliver

Highlights: The year was outstanding as far as establishment of economic insect infestations is concerned in Louisiana. The invasion of seven northeast parishes by EUROPEAN CORN BORER, the occurrence of A WHITE-FRINGED BEETLE (Graphognathus perigrinus) in one parish about 120 miles west of the Mississippi River, complete destruction of some corn fields by SOUTHERN GREEN STINK BUG, further eastward movement of the SOUTHWESTERN CORN BORER, serious damage to heading rice by A CONE-HEADED GRASSHOPPER (Neoconocephala sp.) in many fields in southwest Louisiana, severe infestations of the SOUTHERN ARMYWORM in sweetpotato and tomato fields and a serious outbreak of A SOD WEBWORM (Pachyzancla phaeopteralis) in the southeastern area of the State mark a few of the ever-increasing problems that occurred in Louisiana in 1957 and which will require more attention in the future.

Cereal and Forage Insects: ARMYWORM (Pseudaletia unipuncta) was a threat to small grains in the upper Mississippi delta, the Ouachita Valley and the Red River Valley in April and May. The earliest infestations were found in the Baton Rouge area during the week of February 15. Light populations (non-damaging) were observed in several southeastern parishes during the week of February 21. These light infestations remained throughout April, but never built up to damaging numbers. During the first week of April, light infestations were found in small grains in 12 parishes. During the last week of April heavy populations were found in oats in several areas. These infestations, from 1 to 15 per square foot, were present primarily in very dense and wind blown stands. About May 3, populations were threatening oats, wheat and rye grasses in several parishes in the Red River, Ouachita and Mississippi Valleys. By May 10 heavy populations of A PARASITE (Apanteles sp.) had built up and it is beleived that these parasites and a disease were the principal controlling factors of armyworm last season. Few if any controls were needed. By late May most grains were near maturity and armyworm threats had been reduced or supressed. The greatest infestations in the State were about 30 larvae per square foot in northeast Louisiana. FALL ARMYWORM (Laphygma frugiperda) populations were statewide and heavy on several crops during late spring, summer and early fall. Late corn was damaged most severely with a large percent of the fields being heavily infested. The first infestations observed were in corn in St. Mary Parish during the first week of June. By June 21 damaging infestations were found on corn and grasses in wide areas. By July 4 infestations were statewide on corn, rice, alfalfa and other forage crops. This was the second major brood. These infestations remained throughout the State until late August. At this time late corn and alfalfa were the principal hosts. Infestations were reduced markedly by October 1. SOUTHERN GREEN STINK BUG (Nezara viridula) infestations were very troublesome in several corn fields, particularly in the Ouachita Valley, during late spring and early summer. A few fields were completely destroyed and required replanting. EUROPEAN CORN BORER (Pyrausta nubilalis) was found in seven northeastern parishes this year during late summer. Infestations observed were generally very light and in old corn. Larvae were found in corn at Ferriday, Concordia Parish; St. Joseph, Tensas Parish; Mound, Madison Parish; Lake Providence, East Carroll Parish; Rayville, Richland Parish; Oak Grove, West Carroll Parish and Mer Rouge, Morehouse Parish. Extensive surveys were made in Catahoula, Franklin, Ouachita and Lincoln Parishes but no larvae were found. This insect presents, potentially, a very serious problem. A WHITE-FRINGED BEETLE (Graphognathus perigrinus) was found infesting white clover at Crowley, Louisiana in Acadia Parish during early summer. This is the first infestation known to occur west of the Mississippi River in Louisiana. SPOTTED ALFALFA APHID (Therioaphis maculata) infestations were generally light in alfalfa. There was no instance where infestations were as severe as in 1956. CORN EARWORM (Heliothis zea) infestations were general and widespread in corn, many fields having up to 75 percent of the ears infested. During September and October, infestations were widespread on alfalfa. TARNISHED PLANT BUG (Lygus lineolaris) infestations were very heavy on crimson clover in the hill section of north Louisiana in the spring and early summer with 10 per sweep being very common during the bloom stages. Populations of 100-600 per 100 sweeps of alfalfa was common throughout the Red River Valley also. THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) infestations were sporadic in alfalfa with the most severe infestations in alfalfa grown for seed. Tremendous populations of PEA APHID (Macrosiphum pisi) were present in vetch, burclover and alfalfa over the State; but damage was barely noticeable. GARDEN WEBWORM (Loxostege similalis) infestations were very heavy in alfalfa during the summer in the Red River Valley and northeastern sections where alfalfa is grown. Some alfalfa grown for seed received control. BEET ARMYWORM (Laphygma exigua) populations were moderately heavy in alfalfa, some fields receiving control. Several unidentified species of LOOPERS (Noctuidae) were very numerous in alfalfa throughout the greater part of the summer. Partial defoliation was very noticeable in many fields, especially in the Red River Valley. SWEETCLOVER APHID (Myzocallidium riehmi) were taken from sweetclover in East Baton Rouge and St. John the Baptist Parishes in early spring. This is the first record in the State. Only light populations of GREENBUG (Toxoptera graminum) were found on small grains in early spring. A very heavy mixed population of GREENBUG and APPLE GRAIN APHID (Rhopalosiphum fitchii) infested several fields of small grain in East Carroll Parish during April. Parasitic control eliminated these buildups. LESSER CORNSTALK BORER (Elasmopalpus lignosellus) infestations occurred in Washington Parish and some sections of northeast Louisiana, but were of little importance. SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) infestations in corn were severe particularly in upper Caddo Parish in the summer. Some fields had 80-90 percent infestations. Infestations occurred eastward from the Texas line through Caddo, Bossier, Webster and Claiborne Parishes and southward to U.S. Highway no. 79. SORGHUM WEBWORM (Celama sorghiella) infestations were present in all fields of grain sorghum examined in Tensas, Franklin and Caldwell Parishes. SORGHUM MIDGE (Contarinia sorghicola) damage to grain sorghum was very apparent in most fields. CLOVER SEED CHALCID (Bruchophagus gibbus) was very plentiful in alfalfa seed fields in Bossier Parish. Some fields received control. SUGARCANE BORER (Diatraea saccharalis) heavily infested several fields of rice in Avoyelles Parish. Some fields had 75-90 percent of the heads deformed. Many light infestations were observed in Acadia, St. Landry, Lafayette and Jefferson Davis Parishes. Growing corn in the Crowley - Jennings area is almost impossible due to the attacks by sugarcane borer. RICE STINK BUG (Oebalus pugnax) populations were about average with 40-60 per 100 sweeps being the highest encountered. A CONE-HEADED GRASSHOPPER (Neoconocephala sp.) caused considerable damage to young rice heads in several fields in southwest Louisiana. A MITE (Petrobia apicalis) was generally heavy and widespread over the southern two-thirds of the state in vetch, white and crimson clover in early spring. Damage was very noticeable but went without remedy. VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) populations reached damaging numbers as far north as Waterproof, Tensas Parish, on soybeans. Some fields received control where complete defoliation would have occurred. GRAPE COLASPIS (Colaspis sp.), and BANDED CUCUMBER BEETLE (Diabrotica balteata) caused considerable defoliation of soybeans in Ascension, Assumption, Iberville and Lafourche Parishes in June and July. A SOD WEBWORM (Pachyzancla phaeopteralis) was a severe problem on lawns and sods in southeastern areas. Many sods were completely defoliated. VARIEGATED CUTWORM (Peridroma margaritosa) was numerous during spring in vetch, clover, alfalfa and oats in several parishes. CORN LEAF APHID (Rhopalosiphum maidis) was plentiful on sorghum and late corn during August and September but did very little, if any, damage. SUGARCANE BORER (Diatraea saccharalis) was the most severe pest of surgarcane, the first generation alone killing about 432 stalks per acre, as an average, over the Cane Belt. A few localized infestations of SUGARCANE BEETLE (Euetheola rugiceps) occurred with some damage to stands in the spring.

Truck Crop Insects: CABBAGE LOOPER (Trichoplusia ni) remains the most damaging pest of cole crops in Louisiana. CROSS-STRIPED CABBAGEWORM (Evergestis rimosalis), DIAMONDBACK MOTH (Plutella maculipennis), and IMPORTED CABBAGEWORM (Pieris rapae) also infested cole crops in the southern part of the State to the extent of reducing yield and quality. A STINK BUG (Euschistus bifibulus) was a problem on tomatoes in late spring and early summer over most of the southeastern one-quarter of the State. SOUTHERN ARMYWORM was numerous and injurious on tomato plants in June; the infestations covering several southeastern parishes. Southern armyworm infested sweetpotato fields to the extent that control was necessary as far north as Waterproof, Tensas Parish. Many fields without treatment were completely defoliated. VEGETABLE WEEVIL (Listroderes costirostris obliquus) was a problem on seedling transplants of tomatoes and peppers in Tangipahoa Parish. Some fields were replanted three and four times before a stand could be obtained. YELLOW-MARGINED LEAF BEETLE (Microtheca ochroloma) was found infesting mustard and turnip greens in St. John the Baptist Parish in May, this being the second known infestation in Louisiana, which covered several acres. A NITIDULID BEETLE (Lobiopa insularis) attacked strawberries in Tangipahoa Parish in the spring. Growers had terminated harvest when it became numerous enough to cause concern to the cold packing industry. The loss was not as great as in 1956. BLACK CUTWORM (Agrotis ypsilon) was damaging to strawberry plants in most fields in Tangipahoa Parish in April and May. No measurable damage could be determined. SPIDER MITES (Tetranychus spp.) and STRAWBERRY ROOT APHID (Aphis forbesi) were numerous throughout the strawberry-growing region of Louisiana. Damage to strawberry foliage was light and generally insignificant. STRAWBERRY LEAFROLLER (Ancylis comptana fragariae) was numerous in plant beds in June and July and causing some concern. Some infestations were heavy enough to defoliate 25 percent of the plants.

Cotton Insects: BOLL WEEVIL (Anthonomus grandis) was the most important cotton pest in Louisiana again in 1957. Infestations were erratic. Some areas got by with little control, particularly in the upper Red River Valley. In the Mississippi and Ouachita Valleys, the Macon Ridge and lower Red River Valley, infestations generally required control. Good control was obtained where the practices were conducted according to recommendations. BOLLWORM (Heliothis zea) infestations were about normal over the State. There were some complaints concerning poor control. Control was obtained where recommended treatments were initiated properly. COTTON LEAFWORM (Alabama argillacea) infestations began early, particularly in southwest Louisiana. The first moths were seen about June 20 in the Baton Rouge area. Many fields in the path of Hurricane Audrey were completely defoliated early because farmers did not control cotton leafworm. SPIDER MITES (Tetranychus sp.) and COTTON APHID (Aphis gossypii) were of little importance. A few isolated infestations occurred but were not serious. THRIPS (Frankliniella fusca et al.) were numerous on seedling cotton but damage was not serious. CABBAGE LOOPER infestations were heavier than at any time in past years in several southwestern parishes. Control practices were not satisfactory.

Forest, Ornamental and Shade Tree Insects: An infestation of SOUTHERN PINE BEETLE (Dendroctonus frontalis) became established in an area of pine timber near Pride, East Baton Rouge Parish, in the spring. Damage was considerable in the small area infested. NANTUCKET PINE MOTH (Rhyacionia frustrana) infestations were many and widespread. There were heavy infestations in Claiborne, Acadia, Webster, Lincoln, Tangipahoa and Livingston Parishes. PINE NEEDLE MINER (Exoteleia pinifoliella) infested many pine trees in areas of southwest and west central Louisiana in June and July, causing severe needle discoloration. PALES WEEVIL (Hylobius pales) infested and damaged some pine seedling in areas of Claiborne Parish. One severe infestation of A WHITE GRUB (Phyllophaga sp.) became established in a pine seedling nursery at Homer, Claiborne Parish, in July. Control was obtained after the loss of many seedlings. WALNUT CATERPILLAR (Datana integerrima) infestations caused severe defoliation of pecan over a large portion of south Louisiana. Complete defoliation of some trees was common in many areas during the summer. FALL WEBWORM (Hyphantria cunea) infestations were statewide on pecan, persimmon, willow, and wild cherry throughout most of the summer and early fall. They were not as severe as in 1956. PINE COLASPIS (*Colaspis pini*) was a problem in many pines in Livingston and East Baton Rouge Parishes during the summer. Shade tree pines were apparently infested worst.

Beneficial Insects: A HYMENOPTEROUS PARASITE (*Apanteles militaris*) was very numerous in small grain fields infested by armyworms in May and early June. It is believed that these parasites are responsible for the rapid reduction and suppression of many armyworm infestations in Ouachita, East Carroll, West Carroll, Tensas, Madison and Richland Parishes. A DAMSEL BUG (*Nabis* sp.) was the most numerous predator in alfalfa fields in the Red River Valley. Other species of predators very common in alfalfa fields were SYRPHID FLY larvae, CONVERGENT LADY BEETLE (*Hippodamia convergens*), LACEWINGS (*Chrysopa* spp.),A BIG-EYED BUG (*Georcoris* sp.), A BEETLE (*Collops balteata*) and GROUND BEETLES (*Calosoma* spp.). A GREGARIOUS PARASITE (*Apanteles* sp.) was a very efficient factor in reducing cabbage looper populations in cotton fields in several southwestern parishes during the summer. GROUND BEETLES were helpful in destroying larvae and pupae of the southern armyworm and armyworm.

Stored-Grain Insects: RICE WEEVIL (*Sitophilus oryza*) was the most important pest of stored corn in the State. Corn in all areas was infested, the greatest damage occurring in north central, southeastern and southwestern areas. Some corn was heavily infested when harvested. ANGOUMOIS GRAIN MOTH (*Sitotroga cerealella*) was abundant in many corn cribs over the State. Several species of bran beetles were also numerous. Very little control was attempted in any area.

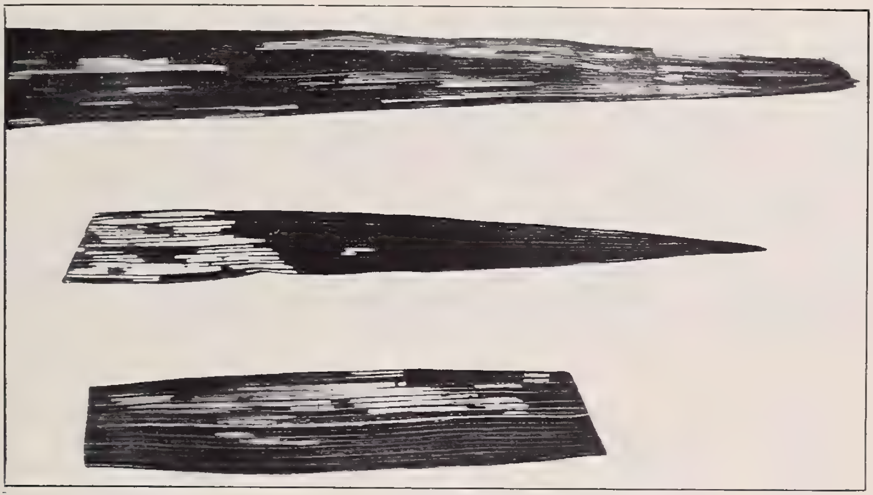
Insects Affecting Man and Animals: MOSQUITOES (*Aedes* spp., *Psorophora* spp., *Culex* spp. et al.) were very abundant in most sections of Louisiana throughout the warm season. In one section of Ouachita Parish, *Psorophora* sp. were so severe in June that field workers could hardly work. In Plaquemine Parish SALT-MARSH MOSQUITO (*Aedes sollicitans*) was a very serious handicap to field workers throughout the summer. This species was also abundant and troublesome to workers over the remainder of southern Louisiana. HORN FLY (*Siphona irritans*) was numerous on cattle over most of the State throughout the summer and early fall. HORSE FLIES (*Tabanus* spp. et al.) were also numerous about cattle in the summer and early fall. Woods cattle, particularly, suffered severely from horse fly attacks. HOUSE FLY (*Musca domestica*) continues to be a problem around chicken houses, dog pens, barns and milk sheds. A few SCREW-WORM(*Callitroga hominivorax*) inffstations occurred in Bossier, Acadia and Rapides Parishes.

Miscellaneous Insects: A DAMP-WOOD TERMITE (*Zootermopsis* sp.) was found infesting the frame work of a house in Livingston Parish in September. This termite was imported with western red cedar from the Pacific Northwest. Eradication was attempted, the outcome is pending. IMPORTED FIRE ANT (*Solenopsis saevissima richteri*) infestations are present in about 40 parishes. The initial eradication program has begun.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

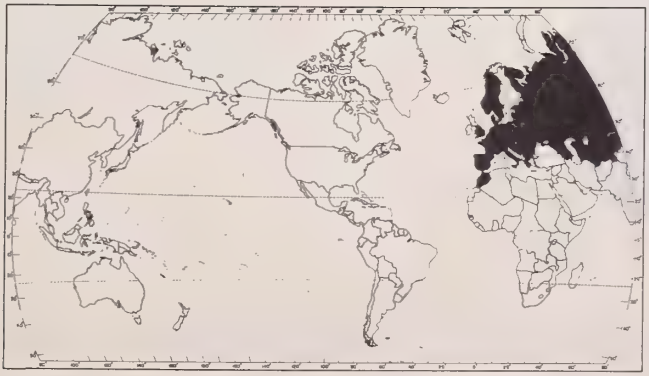
A LEAF BEETLE (Lema melanopa L.)

Economic Importance: This leaf beetle has been a serious pest of cereal crops in certain areas of Europe for many years. Damage is caused by both the adult and the larva. In Russia losses from infestations have been estimated to range from 25 to 50 percent of the crop. Serious damage occurred in Hungary in 1891 with losses estimated at between 1,000,000 and 1,250,000 pounds sterling. Attacks were so severe in the spring of 1931 in some localities in Rumania that the crop had to be plowed under. In 1938, the wheat crop in a district in Galicia, Spain, was almost totally destroyed. Losses on cereals in Spain in 1939 were estimated at 600,000 pesetas and at intervals the crop is almost totally destroyed in some areas of that country. Late varieties of wheat suffer most.



Oat Leaves Showing Typical
Injury by Larvae of Lema melanopa

Distribution: Occurs throughout most of Europe, including England and Wales in Britain, and extending into Siberia in USSR. Also recorded in Morocco in North Africa.

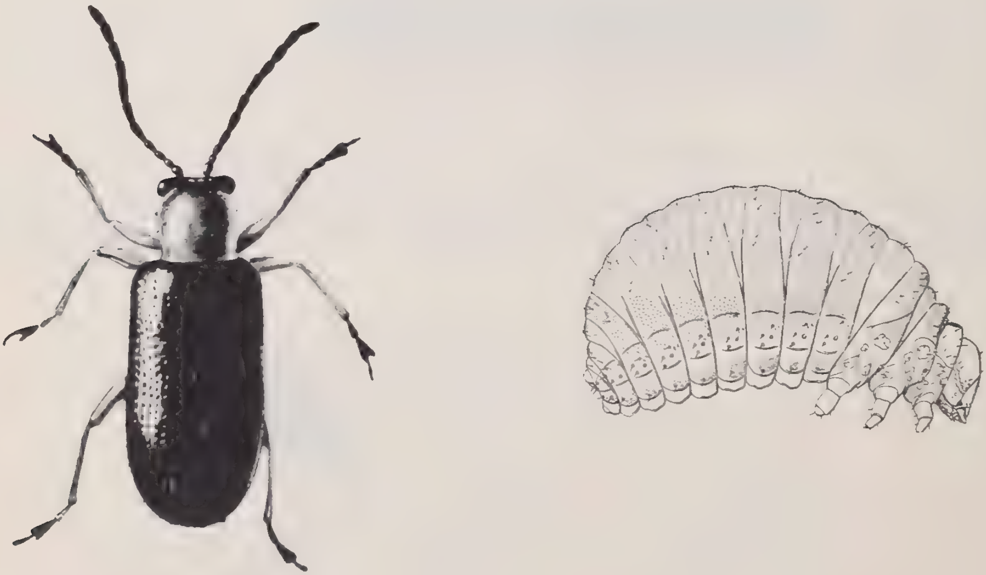


General Distribution of Lema melanopa

Hosts: Feeds on leaves of all cereals and grasses with barley, oats and wheat being the most important cultivated crops.

Life History and Habits: There is one generation a year in Italy. Life history is as follows: The overwintered adults mate in spring and oviposit for about 45 to 60 days on leaves of cereals. The females lay from 100 to 150 eggs each with up to 4 on a single leaf. The larvae hatch in from 7 to 15 days and feed on the leaves, migrating from one to another. They pass through 4 instars and become full-fed in 12 to 20 days and are present generally from late April to mid-June. Pupation occurs in earthen cells at depths of $\frac{1}{2}$ to 2 inches with adults emerging 20 to 25 days later. Adults feed on grasses from July to autumn, then hibernate under trash or in crevices, rarely in soil, until mid-March. In England the life cycle occupies about 46 days and of approximately the same duration in USSR. Both adults and larvae feed on cereals, the chief damage being done by the adults in the spring when food is scarce. Larval feeding on the leaves further increases the damage already caused by the adults, however.

Description: The adult is approximately 4 to 4.5 mm. in length, males being slightly smaller and narrower than the females. The head black; first two antennal segments rather globular. Thorax light reddish-brown, glossy; elytra metallic-blue with parallel perpendicular lines of punctures. Legs yellow, with tarsi and tips of tibiae black. The egg is cylindrical, rounded, 1 mm. in length, darkening to almost black before hatching. The larva is of form of Colorado potato beetle; head, spiracles and legs somewhat heavily chitinized, dark brown to black; remainder soft, more or less wrinkled, dirty to bright yellow, bearing numbers of stiff curved hairs which in the dorsal regions point forwards and on the sides upwards; nine spiracles; anus dorsal and directed forwards. Color usually obscured by a covering of excrement. Length 5 to 6 mm. The pupa is enveloped in thin transparent membrane, bright yellow, darkening rapidly until adult color is attained. Length 4 to 4.5 mm.



Adult and Larva of *Lema melanopa* (greatly enlarged)

Figures (except map): Larva from Venturi, F. 1942. Redia 28:11-88. Adult and damage from Hodson, W. E. H. 1929. Bul. Ent. Res. 20(1):5-14.

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